

U.S. Serial No. 09/521,072
Reply to Office Action of April 30, 2007
Family Number: P2000J016

II. CLAIM AMENDMENTS

Claims 1-7 are currently pending.

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1. (Original): A method for measuring carbon numbers and molecular weights of isoparaffins using a field ionization mass spectrometer that comprises reducing an emitter current in the field ionization mass spectrometer below a threshold value to substantially reduce fragmentation of isoparaffin molecular ions.

2. (Original): The method of claim 1 wherein said fragmentation of isoparaffin molecular ions is less than about fifty (50) percent.

3. (Original): The method of claim 1 wherein said emitter current is less than about 20 mA for an emitter ranging from about 5 microns to about 50 microns in diameter.

4. (Original): The method of claim 3 wherein said emitter current ranges from about 3mA to about 20 mA.

5. (Original): The method of claim 1 wherein said isoparaffins are characterized as C_x isoparaffins where x is greater than about 10.

6. (Original): The method of claim 5 wherein x ranges from about 10 to about 50.

7. (Original): The method of claim 1 wherein a carbon number distribution of isoparaffins mixtures is determined by directly measuring a molecular ion distribution of the isoparaffin mixtures.